QP Code : 16000

(3 Hours) [Total Marks : 100

N.B : (1) Question **no. 1** is **compulsory.**
(2) All questions carry **equal** marks.
(3) Attempt any **four** questions out of the rest.

1. (a) Discuss various Models of Distributed System? 10
   (b) Differentiate between NOS and DOS giving examples of each? 10

2. (a) What is the difference between Stateful and Stateless server implementation 10
   models? Give example of distributed applications using each of the implementation
   model.
   (b) What do you understand by clock synchronization in distributed systems? Explain 10
   one technique of logical clock synchronization.

3. (a) Explain Code Migration and the role of Mobile Agents? 10
   (b) List down the issues in designing Distributed Load balancing techinque. Explain 10
   any two in detail.

4. (a) Explain the issues to be handled while designing DSM. 10
   (b) Explain RPC Call semantics. 10

5. (a) What are the various Group Communication protocols, Explain any one. 10
   (b) How Deadlock Detection is different for a distributed system. Explain any one 10
   algorithm of Distributed Deadlock Detection.

6. (a) Explain Distributed algorithm for Mutual Exclusion. What are the advantages and 10
   the disadvantages of it over Centralized algorithms.
   (b) Explain Process Migration in Heterogeneous environment. 10

7. Answer any **two** :— 20
   (a) Lightweight RPC
   (b) Name Resolution in DNS.
   (c) Data Centric and Client Centric Consistency Models.

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